

AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (CANCELLED)
2. (PREVIOUSLY PRESENTED) The water absorbent resin composition as set forth in claim 23, wherein the particulate water absorbent resin (A) is a particulate water absorbent resin whose surface is cross-linked by a surface cross-linking agent containing a multivalent alcohol.
3. (PREVIOUSLY PRESENTED) The water absorbent resin composition as set forth in claim 23, wherein a moisture absorption blocking ratio is 30 % or less when the water absorbent resin composition is left at 25°C in a relative humidity of 90 % for an hour.
4. (PREVIOUSLY PRESENTED) The water absorbent resin composition as set forth in claim 23, wherein a centrifuge retention capacity (CRC) at which the water absorbent resin composition absorbs 0.90 wt % of a physiological saline without load for 30 minutes is 25g/g or more, and a diffusion absorbency (DAP) at which the water absorbent resin composition absorbs 0.90 wt % of a physiological saline at 1.9 kPa for 60 minutes is 20 g/g or more.

5. (PREVIOUSLY PRESENTED) An absorber, comprising the water absorbent resin composition as set forth in claim 23 and a hydrophilic fiber so that an amount of the water absorbent resin composition (core concentration) is 20 wt % or more with respect to a total amount of the water absorbent resin composition and the hydrophilic fiber.

6. (ORIGINAL) An absorbent article, comprising: the absorber as set forth in claim 5; a liquid-permeable surface sheet; and a liquid-impermeable back sheet.

7. (PREVIOUSLY PRESENTED) A method for producing a water absorbent resin composition, comprising:

adding a solution of an aqueous multivalent metal compound (B) to a particulate water absorbent resin (A) with a cross-linked surface, said particulate water absorbent resin (A) having a cross-linking structure obtained by polymerizing an unsaturated monomer containing an acid group; and mixing the solution of the aqueous multivalent metal compound (B) with the particulate water absorbent resin (A),

wherein the particulate water absorbent resin (A) contains 95 wt % or more of the particles whose particle diameter is less than 850 μm and not less than 106 μm , and a weight average particle diameter of the particles is less than 500 μm and not less than 300 μm , and a logarithmic standard deviation ($\sigma\zeta$) of a particle size distribution of the particulate water absorbent resin (A) is 0.45 or less, and a water-soluble component of the particulate water absorbent resin (A) is 35 wt % or less, and

an amount of a multivalent metal component contained in the solution of the aqueous multivalent metal compound (B) is 0.001 wt % to 10 wt % with respect to the particulate water absorbent resin (A), and

a concentration of the aqueous multivalent metal compound (B) in the solution is 0.40 or more with respect to a saturated concentration of the aqueous multivalent metal compound (B) in the solution, and

at least one of a temperature of the particulate water absorbent resin (A) is 50°C or higher and lower than 100°C, and a temperature of the solution of the aqueous multivalent metal compound (B) is 30°C or higher and lower than 100°C, and

wherein an extraction rate of the multivalent metal component around the surface of said particulate water absorbent resin is 7.6 wt % to 14.8 wt %.

8. (PREVIOUSLY PRESENTED) A method for producing a water absorbent resin composition, comprising:

mixing a particulate water absorbent resin (A) having a cross-linking structure obtained by polymerizing an unsaturated monomer containing an acid group, a solution of an aqueous multivalent metal compound (B), and an organic surface cross-linking agent (C); and heating a mixture that has been obtained in the mixing step at 150 to 300°C so as to cross-link a surface of the particulate water absorbent resin (A),

wherein the particulate water absorbent resin (A) contains 95 wt % or more of the particles whose particle diameter is less than 850 µm and not less than 106 µm, and a logarithmic standard deviation ($\sigma\zeta$) of a particle size distribution of the particulate water absorbent resin (A) is 0.45 or less, and

an amount of a multivalent metal component contained in the solution of the aqueous multivalent metal compound (B) is 0.001 wt % to 10 wt % with respect to the particulate water absorbent resin (A), and

a concentration of the multivalent metal component contained in a mixed solution including the solution of the aqueous multivalent metal compound (B) and the organic surface cross-linking agent (C) is at least 1.80 wt %,

wherein an extraction rate of the multivalent metal component around the surface of said particulate water absorbent resin is 7.6 wt % to 14.8 wt %.

9. (PREVIOUSLY PRESENTED) A method for producing a water absorbent resin composition, comprising:

heating a precursor (D) obtained by mixing a particulate water absorbent resin (A) having a cross-linking structure obtained by polymerizing an unsaturated monomer containing an acid group, a solution of a multivalent metal compound (B), and an organic surface cross-linking agent at 150°C to 300°C so as to cross-link a surface of the particulate water absorbent resin (A),

wherein the particulate water absorbent resin (A) contains 95 wt % or more of the particles whose particle diameter is less than 850 µm and not less than 106 µm, and a logarithmic standard deviation ($\sigma\zeta$) of a particle size distribution of the particulate water absorbent resin (A) is 0.45 or less, and

an amount of a multivalent metal component contained in the solution of the multivalent metal compound (B) is 0.001 wt % to 10 wt % with respect to the particulate water absorbent resin (A),

a concentration of the multivalent metal component contained in a mixed solution including the solution of the multivalent metal compound (B) and the organic surface cross-linking agent is at least 1.80 wt %, and

a humidification blocking ratio (wt %) of the precursor (D) is 80 wt % or less, and

wherein an extraction rate of the multivalent metal component around the surface of said particulate water absorbent resin is 7.6 wt % to 14.8 wt %.

10. (PREVIOUSLY PRESENTED) The method as set forth in claim 7, wherein the water absorbent resin composition includes a polymer having a cross-linking structure obtained by polymerizing at least one of acrylic acid and salt thereof.

11. (CANCELLED)

12. (PREVIOUSLY PRESENTED) The method as set forth in claim 8, wherein at least one of the solution of the multivalent metal compound (B) and the organic surface cross-linking agent is heated at 30°C or higher.

13. (PREVIOUSLY PRESENTED) The method as set forth in claim 8, wherein the organic surface cross-linking agent includes a multivalent alcohol.

14. (PREVIOUSLY PRESENTED) The method as set forth in claim 8, wherein the multivalent metal component of the multivalent metal compound (B) includes one or more metals selected from bivalent or further multivalent typical metals and transition metals whose group numbers are 4 to 12.

15. (PREVIOUSLY PRESENTED) The method as set forth in claim 8, wherein the multivalent metal component of the multivalent metal compound (B) is aluminum.

16. (PREVIOUSLY PRESENTED) The method as set forth in claim 9, wherein at least one of the solution of the multivalent metal compound (B) and the organic surface cross-linking agent is heated at 30°C or higher.

17. (PREVIOUSLY PRESENTED) The method as set forth in claim 9, wherein the organic surface cross-linking agent includes a multivalent alcohol.

18. (PREVIOUSLY PRESENTED) The method as set forth in claim 9, wherein the multivalent metal component of the multivalent metal compound (B) includes one or more metals selected from bivalent or further multivalent typical metals and transition metals whose group numbers are 4 to 12.

19. (PREVIOUSLY PRESENTED) The method as set forth in claim 9, wherein the multivalent metal component of the multivalent metal compound (B) is aluminum.

20. (PREVIOUSLY PRESENTED) The method as set forth in claim 8, wherein the water absorbent resin composition includes a polymer having a cross-linking structure obtained by polymerizing at least one of acrylic acid and salt thereof.

21. (PREVIOUSLY PRESENTED) The method as set forth in claim 9, wherein the water absorbent resin composition includes a polymer having a cross-linking structure obtained by polymerizing at least one of acrylic acid and salt thereof.

22. (CANCELLED)

23. (PREVIOUSLY PRESENTED) A water absorbent resin composition, comprising:

a particulate water absorbent resin (A) having a cross-linking structure obtained by polymerizing an unsaturated monomer containing an acid group, said particulate water absorbent resin (A) having a cross-linked surface, wherein the water absorbent resin composition contains 95 wt % or more of particles whose particle diameter is less than 850 μm and not less than 106 μm , and a weight average particle diameter of the particles is less than 500 μm and not less than 300 μm , and a logarithmic standard deviation ($\sigma\zeta$) of a particle size distribution of the water absorbent resin composition is 0.45 or less, and a water-soluble component of the water absorbent resin composition is 5 wt % or more and 35 wt % or less, the water-soluble component being a value obtained by measuring an amount of the water-soluble component in a water-soluble component extract solution in which the water-soluble component of the water absorbent resin composition is extracted, the water-soluble component extract solution being prepared by adding the water absorbent resin composition to a saline and stirring the mixture thus obtained; and

a multivalent metal component, wherein an extraction rate of the multivalent metal component around the surface of said particulate water absorbent resin is 7.6 wt % to 14.8 wt %.

24. (PREVIOUSLY PRESENTED) The water absorbent resin composition as set forth in claim 23, wherein a saline flow conductivity (SFC) is $30 \times 10^{-7}\text{cm}^3\text{s/g}$ or more.

25. (PREVIOUSLY PRESENTED) The water absorbent resin composition as set forth in claim 23, wherein a saline flow conductivity (SFC) is $100 \times 10^{-7}\text{cm}^3\text{s/g}$ or more.

26. (PREVIOUSLY PRESENTED) The water absorbent resin composition as set forth in claim 23, wherein a centrifuge retention capacity (CRC) at which 0.90 wt% of saline is absorbed for 30 minutes without any load is 27 g/g or more and 45 g/g or less.
27. (PREVIOUSLY PRESENTED) The water absorbent resin composition as set forth in claim 23, wherein an absorbency against pressure (AAP: Absorbency Against Pressure) at which 0.90 wt % of saline is absorbed for an hour under pressure of 0.7 psi (4.83 kPa) is 21 g/g or more and 50 g/g or less.
28. (CANCELLED)

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END OF CLAIM LISTING

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